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ABSTRACT

Agricultural Education teacher educators are interested in and are making efforts to keep their training programs abreast of changing patterns and emphases in agricultural education. There is a real sense of interest and need among those people interviewed in this study for a better means of communication among teacher training institutions relative to what is being done to improve the training of vocational agriculture teachers. These are conclusions from a study whose aim was to determine what changes have taken place in recent years in the methods and requirements of training agricultural occupations teachers. The data desired was secured by means of a questionnaire which was used in a personal interview with the department chairman or some other member of the agricultural education staff, and by mailing the questionnaire to chairman of departments in other universities. (Data tables, and a 58 item list of practices reflecting changes and innovations in teacher education as reported through the questionnaires are included.) (KP)

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A STUDY OF THE METHODS AND PROCEDURES USED IN TRAINING TEACHERS OF AGRICULTURAL OCCUPATIONS

By

Ralph A. Benton

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FOREWORD

The author wishes to express his thanks and appreciation to those agricultural teacher educators who responded to his request for information relative to their teacher education programs. This paper is a summary of that information and he is pleased to provide you a copy. Perhaps its usefulness is limited mostly to that of a standard by which you can compare your own requirements. Then, too, the final list of newer practices being introduced by the different universities might be suggestive.

Ralph A. Benton, Professor
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A STUDY OF THE METHODS AND PROCEDURES USED IN TRAINING TEACHERS OF AGRICULTURAL OCCUPATIONS

Introduction

From the passage of the Smith-Hughes Act in 1917 to the 1963 Vocational Education Act, the emphasis in teaching agriculture was on production and during these years there was little change in the pattern of training vocational agriculture teachers.

The 1963 Vocational Education Act called for the updating of present programs and urged the adoption of new and innovative programs in all of vocational education including agriculture. The 1968 Amendments to the 1963 Vocational Education Act put the primary emphasis of programs on groups of people, particularly those with special needs, rather than on occupational areas. In many cases this meant new programs.

As a result of these changes in recent years to include instruction and training in additional kinds of agriculture, there is need for new and innovative ways of training agricultural occupations teachers. In the pre-service preparation of agriculture teachers there is need to develop a wide variety of modules to be used by individuals to meet their teaching needs. Examples would be in such areas as methods

of instruction, program planning, supervised occupational experience in occupations to be taught, and professional experience in teaching and related activities. Furthermore, it is predicted that pre-service teacher training programs will require the student teacher to spend more time in the school and community prior to the time allocated for student teaching. This could range from a few days to two weeks before university classes begin in the fall to the major portion of a quarter prior to student teaching.

Objectives

The main purpose of this study is to determine what changes have taken place in recent years in the methods and requirements of training agricultural occupations teachers. Supporting objectives include:

1. To determine the contents of methods courses and number of hours required.
2. To determine the number and content of other supporting courses in Agricultural Education.
3. To determine the length of time in student teaching.
4. To determine supervision of student teachers procedures.
5. To determine the amount of field experiences and exposure of students to their teaching center prior to beginning student teaching.
6. To determine what changes have taken place in the total program to accommodate new needs and programs.

Procedure

The data desired was secured by means of a questionnaire which was used in a personal interview with the department

chairman or some other member of the agricultural education staff, and by mailing the questionnaire to chairmen of departments in other universities. Visits were made to seventeen universities and the questionnaire was mailed to thirty others of which twenty-three responded. The respondents included teacher educators from twelve south-west, west, and north-west universities, sixteen central and north central universities, and twelve southern, south-east, east, and north-eastern universities.

Analysis of Data

It was found that of the forty universities 23 (57.5%) were operating on the semester system while the other 17 (42.5%) were on the quarter system. In addition, 65 percent of the departments were housed in the College of Agriculture while the other 35 percent were mostly in the College of Education.

Total Hours in Agriculture

The minimum total hours required in agricultural subjects of agricultural education majors ranged from a low of 24 to a high of 62 with an average of 49.9 hours for the 23 departments on the semester system. The 17 departments on the quarter system required of their agricultural education majors an average of 67.9 hours, ranging from a low of 40 to a high of 90 hours. Converting the quarter hours to equivalent semester hours resulted in an overall average of 47.9 semester hours for the 40 universities. By converting the semester hours to equivalent quarter hours an average of 71.8 quarter hours resulted

for the 40 universities. (Table 1)

Table 1 shows the average number of hours required in agricultural subjects on both the semester and the quarter system in those departments of agricultural education housed in the College of Agriculture and those in the College of Education. The first row of figures are the averages of hours required as reported. The second row of figures represents the conversion of the hours to equivalents within each college. An average of 49.9 hours of agriculture were required in the 23 universities on the system while 68.0 hours were required in the 17 universities operating on the quarter system.

Table 1 - Minimum Semester and Quarter Hour Requirements in Agriculture

Conditions	College of Agriculture		College of Education	
	N=16 Sem. Hrs.	N=11 Qtr. Hrs.	N=7 Sem. Hrs.	N=6 Qtr. Hrs.
Average hrs. required as reported	49.4	71.1	51.1	62.3
Average of equivalent hrs. plus semester and/or quarter hrs.	48.3	72.3	46.6	70.1

Average of departments in both colleges (N=23) in Sem. Hrs. = 49.9

Average of departments in both colleges (N=17) in Qtr. Hrs. = 67.9

Average of departments in both colleges (N=40) plus equivalencies in semester hours = 47.9.

Average of departments in both colleges (N=40) plus equivalencies in quarter hours = 71.8.

By converting quarter hours to semester hours or semester hours to quarter hours in both colleges it was found that those departments in the College of Agriculture required 3.6 percent more hours in agricultural subjects than did those departments housed in the College of Education.

Minimum Hours in Agriculture Areas

All agricultural courses taken were listed under one of four major headings, namely, animal science, plant science including soils, agricultural economics, and agricultural mechanics.

In regard to minimum requirements in animal science, it was found that of the 23 departments on the semester system, three had no minimum requirements, i.e., any hours taken at all were purely elective. For the other 20 departments the range was from three to a high of 13 semester hours required. The average was 9.35. This is 18.7 percent of the 49.9 hours required in animal science of agricultural education majors. Of the 17 departments on the quarter system, two had no minimum requirements and the range was from five to 18 with an average of 11.3 quarter hours required in animal science for the other 15 departments. This is 16.6 percent of the 68.0 hours required of agricultural education majors in the quarter system.

In regard to plant and soil science requirements, only one department on the semester system had no minimum requirement in hours. The other 22 departments had a range of six to 16 with an average of 10.7 semester hours. This constitutes 21.4 percent of the total agriculture hours. There

was also one department of those on the quarter system that had no minimum requirements. The other 16 had a range of five to 21 with an average of 11.7 quarter hours required in plant and soil sciences which is 17.2 percent of the total agriculture hours required.

In agricultural economics one semester department had no requirements in hours. The other 22 ranged from a low of three to a high of 12 with an average of 6.7 semester hours required. This is 13.4 percent of the total agricultural hours required.

One department on the quarter system did not require hours in agricultural economics. The other 16 ranged from three to 18 with an average of 10.1 quarter hours which is 14.8 percent of all agriculture hours required.

In agricultural mechanics all 40 departments required some work to be taken. Those on the semester system ranged from a low of five to a high of 18 with an average of 9.6 hours required which is 19.2 percent of all agriculture hours required.

The 17 departments on the quarter system ranged from four to 21 hours with an average of 11.7 quarter hours required in agricultural mechanics. This is 17.2 percent of all agriculture hours required of agricultural education majors in a quarter system.

Table number two summarizes the data related to the minimum hours required in agricultural subjects of agricultural education majors in both semester and quarter hour systems.

Table 2 - Minimum Hours in Agriculture Required of Agricultural Education Majors in 40 Universities.

Semester Schools = 23 Quarter Schools = 17	Minimum Semester Hours				Minimum Quarter Hours			
Subject Matter	low	high	ave.	% total ag. hrs. required	low	high	ave.	% total ag. hrs. required
Animal Science	none	18	9.4	18.7	none	18	11.3	16.6
Plant & Soil Science	none	16	10.7	21.4	none	21	11.7	17.2
Agricultural Economics	none	12	6.7	13.4	none	18	10.1	14.8
Agricultural Mechanics	5	18	9.6	19.2	4	21	11.7	17.2

Elective Hours in Agriculture

The difference between the reported total minimum hours required in agricultural subjects and the total hours required in agriculture are termed elective hours. Those agricultural education departments operating on the semester system reported a low of six to a high of 40 elective hours for an average of 16.5.

The departments on the quarter system ranged from none to a high of 40 with an average of 26.1 hours of agricultural electives.

Compared to the total average hours listed in Table 2 those on the semester system would have 13.5 elective hours in agriculture and those on the quarter system 23.2 hours of electives which, in both cases, would be three hours less

than the 16.5 and 26.1 reported hours of electives in agricultural subjects.

Agricultural Specialties

In view of the fact that changes are occurring in high school vocational agriculture programs across the nation with emphasis on semester courses, special programs, i.e., power mechanics, ornamental horticulture, small animal care, etc., and the development of multi-teacher departments, the author inquired as to what teacher training departments are doing in providing extra training in these areas.

A specialty is loosely defined as an area of study in which the major portion of the elective hours are used in gaining more knowledge, skill, and/or experience in that field. This may be accomplished through course work, laboratory experiences, or by means of an internship, or by a combination of these methods. This is in addition to the broad base usually required for training in basic production agriculture. The responses to the above question are shown in Table 3.

Table 3 - Responses from 40 Agricultural Education Teacher Training Departments on Requiring Majors to Develop a Specialty.

	Semester N=23		Quarter N=17		Jointly N=40	
	No.	Percent	No.	Percent	No.	Percent
Optional	1	4.4	3	17.6	4	10.0
Yes	3	13.0	5	29.4	8	20.0
No	19	82.6	9	53.0	28	70.0

The four departments on the semester system indicating yes or optional in regard to requiring an agricultural specialty of their majors, reported an average minimum of 17.4 semester hours in a given area as constituting a specialty. This compares to the average of 16.5 semester elective hours in agriculture reported by the 23 departments on the semester system. If the 17.4 hours were added to the average minimum of 9.1 hours required in a given area, (Table 2), the total would be 26.5 semester hours a student would have towards a specialty in a given field.

The eight departments on the quarter system indicating yes or optional required an average minimum of 31.9 quarter hours in a given area to be considered as having a specialty. This could go as high as 43.1 if the average minimum required (Table 2) of 11.2 were added to the 31.9.

Working as an internee in an agri-business is another way for the student to gain experience and expertise in an agricultural specialty. Only four or 17.4 percent of the semester system departments offered their students an opportunity to participate in an internship and an average of 4.8 hours were allowed for the experience. Four or 23.5 percent of those on a quarter system offered their majors an opportunity to participate in an internship for which credit was given. An average of 7.5 quarter hours credit were allowed.

Hours of Education Required (Non-Vocational)

Of those departments on a semester system, two of the 23 did not require non-vocational education courses. The

other 21 ranged from a low of 3 to a high of 21 semester hours with an average of 9.0 hours in education (non-vocational). The hours required of those in a quarter system ranged from 3 to 20 with an average of 12.2 quarter hours. Not counting the two departments that did not require education courses, it was found that in 89.4 percent of the departments the education courses were taught by college of education staff.

When comparing the education course requirements of the departments in the two colleges, it was found that the seven departments on the semester system in the College of Education required 24.3 percent more hours than did the fourteen departments in the College of Agriculture. In the quarter system the positions were reversed with the eleven departments in the College of Agriculture requiring 12.5 percent more hours than did the six departments in the College of Education. (Table 4)

It is of interest to note that when the quarter hours were converted to semester hours, and the semester hours converted to quarter hours and then compared, there was practically no difference between the requirements in education by the different colleges. This resulted in an average of 8.9 hours for the semester type departments (25) in the College of Agriculture versus an average of 8.8 hours for the thirteen departments in the College of Education.

Table 4 - Comparison of Required Education Hours in 38 Agricultural Education Teacher Training Departments.

Location	Semester System	Quarter System	Semester Equivalent	Quarter Equivalent	Percent Greater			
					Sem.	Qtr.	Sem. Equiv.	Qtr. Equiv.
College of Agriculture	(N=14)=8.1	(N=11)=11.2	(N=25)=8.9	(N=25)=13.3		+12.5	+1.1	+.0075
College of Education	(N=7)=10.7	(N=6)= 9.8	(N=13)=8.8	(N=13)=13.2	+24.3			

Education courses including general psychology required most by the teacher education departments follow:

Educational Psychology - 34 (85%) departments

General Psychology - 23 (57.5%) departments

Principles and History of Education - 15 (37.5%) departments

Foundations of Education - 13 (32.5%) departments

Instructional Materials - 8 (20%) departments

Hours of Vocational Education Required

All 40 departments required courses in vocational education including methods and student teaching. Those on the semester system (23) ranged from a low of eight to a high of 25 hours with an average of 17.6 hours required. The 17 departments on the quarter system ranged from 18 to 36 hours with an average of 25.8 hours of vocational education required.

When comparing those departments housed in College of Agriculture with those housed in the College of Education, it was found that the 16 departments on the semester system in the College of Agriculture averaged 18.1 hours, and the 7 in the College of Education 16.7 hours, a difference of 7.6 percent. The eleven departments on the quarter system in the College of Agriculture averaged 25.4 hours while the six in the College of Education averaged 26.5 hours, a difference of 4.1 percent more hours required in the College of Education.

On an equivalent basis the 23 departments in the College of Agriculture averaged 17.6 semester hours or 26.4 quarter hours of required vocational education courses. Also by conversion the 17 departments in the College of Education averaged

17.1 semester hours or 25.7 quarter hours of vocational education courses. A summary of this data appears in Table 5.

Table 5 - Comparison of Required Vocational Education Hours in the 40 Agricultural Education Teacher Training Departments.

Location	Semester System	Quarter System	Semester Equiv.	Quarter Equiv.	Percent Greater			
					Sem.	Qtr.	Sem. Equiv.	Qtr. Equiv.
College of Agriculture	N=16 18.1	N=11 25.4	N=27 17.6	N=27 26.4	+7.6		+2.8	+2.6
College of Education	N=7 16.7	N=6 26.5	N=13 17.1	N=13 25.7		+4.1		

Vocational education courses most required by the 40 agricultural education teacher-training departments are as follows:

Methods in Student Teaching.....40 (100.0%)
Student Teaching.....40 (100.0%)
Introduction to Agricultural Education.....22 (55.0%)
Programs or Curricula in Ag. Education.....22 (55.0%)
Adult and/or Young Farmer work.....19 (47.5%)
Summer Practice.....12 (30.0%)
Instructional Materials.....10 (25.0%)
Developing a Co-op Program..... 9 (22.5%)
Seminar..... 8 (20.0%)
The F.F.A.....8 (20.0%)
Principles and Philosophy of Vocational Ed..6 (15.0%)

The above were specific courses but a number of respondents pointed out that some of the above mentioned courses were taught as units in methods or some other course. In addition, 7 (17.5%) of the departments offered credit in an internship with an ag-related business but this was optional, not required.

Methods in Student Teaching

The 23 agricultural education departments on the semester system required from a low of two to a high of eight with an average of 3.6 hours in methods. The 17 departments on the quarter system ranged from three to eight with an average of 4.2 hours required in methods.

Of the 23 departments on the semester system it was found that 16 (69.6%) of them gave methods during the first part of the same semester in which student teaching was done. The other 7 (30.4%) taught methods to the students the semester before they were to student teach.

Of the 17 departments on the quarter system, 14 (82.4%) gave methods the quarter preceding the one in which the students taught. The other three (17.6%) departments taught methods the first part of the quarter in which student teaching was done.

The 16 departments on the semester system who used the first part of a semester for methods ranged from a low of three weeks to a high of ten weeks with an average of 7.68 weeks in methods class before sending the student teachers out to their schools.

The three departments on the quarter system using the first part of the quarter for methods averaged four weeks before sending their students out. These schools intensified methods instruction in this shortened period of time. One school using three weeks for methods had the students meeting

for three hours every day, making a total of 45 hours of instruction.

In regards to the number of times per school year methods were taught, it was found that of those on the semester system. 16 or 69.6 percent offered methods twice while 7 or 30.4 percent taught methods only once a school year for an average of 1.7 times.

The 17 schools on the quarter system averaged exactly two times per year with a range from one to four times in teaching methods.

In answer to the question of taking the methods class to visit one or more vocational agriculture departments, 27 (67.5%) reported they visited one or more times, while 13 (32.5%) did not visit a vo-ag department during methods training. The 27 visited an average of 2.37 times.

Some agricultural education teacher training departments teach an additional methods course in agricultural mechanics. This study revealed that of the 40 departments involved, 13 or 32.5 percent taught agricultural mechanics methods and 27 (67.5%) did not. Furthermore, of the 23 universities on the semester system, only five or 21.7 percent taught a separate methods course in agricultural mechanics for an average of 2.4 semester hours each.

Of the 17 universities on the quarter system, eight or 47.0 percent taught a methods course in agricultural mechanics, which averaged 2.63 hours of credit.

Since cooperative vocational work experience education programs are increasing in number in public schools, the question was asked relative to the inclusion of methods in organizing and operating a co-op program involving ag students in the secondary schools. Eighteen (45.0%) reported that at least some instruction was given in methods for this program while the other 22 (55.0%) did not.

Summer Experience

Some agricultural education teacher training departments require of or make optional to the student, from one to three weeks experience in his student teaching center prior to student teaching. This may be in the late summer or after the public school has opened and before university classes begin on campus. This is largely an orientation period for the student teacher and can be a meaningful experience.

Of the 40 departments in this study, 17 (42.5%) required the summer experience, three or 7.5 percent made it optional, and the other 20 (50.0%) made no provision for it.

The length of time for this experience ranged from two days to four weeks with an average of slightly over two weeks.

Of the 17 departments requiring the summer experience, 10 or 58.8 percent gave a separate grade and credit for the experience. Four departments (23.5%) considered this to be a part of the student teaching experience and was included in that grade. The other three departments did not give a grade for the experience; it was a pass or fail situation. Of the ten departments requiring a summer experience, four

were on the semester system and they averaged 2.5 hours credit for the experience. The other six were on the quarter system and they gave an average of 2.67 quarter hours of credit.

Eight (47.0%) of the seventeen schools made at least one supervisory visit to the high school where the student was involved in the summer experience program, while the other nine (53.0%) did not make a supervisory visit during this time.

Student Teaching

All 40 universities in this study required a period of student teaching in a vocational agriculture department in a public high school.

The time spent at the center in student teaching ranged from a low of six to a high of 18 weeks, with an average of 9.6, for the 23 departments on the semester system. The 17 departments on the quarter system ranged from 6 to 12 with an average also of 9.6 weeks in student teaching.

Credit hours given for student teaching ranged from five to twelve in those universities on the semester system, with an average of 8.2 hours. For those on the quarter system the range was from eight to sixteen with an average of 12.6 hours.

Table 6 lists the data on the amount of time required in student teaching and also the hours of credit given for the different student teaching periods.

Table 6 - Length of Student Teaching Period, Hours of Credit Given, and Number of Universities Involved in Both the Semester and Quarter Systems.

Semester System Universities N=23			Quarter System Universities N=17		
No. Weeks Student Teaching	No. of Universities	Hours of Credit	No. Weeks Student Teaching	No. of Universities	Hours of Credit
6	3	6.67	6	2	9.0
6.5	1	5.0	6.5	1	8.0
7	---	---	7	---	---
8	5	7.6	7.5	1	12.0
9	7	8.1	8	1	10.0
10	3	10.0	9	---	---
11	---	---	9.5	1	12.0
12	---	---	10	4	15.0
13	---	---	11	3	13.3
14	1	12.0	11.5	2	15.5
15	---	---	12	2	12.0
16	2	8.5			
17	---	---			
18	1	9.0			
9.6 wks. average	23	.85 hrs. credit per week	9.6 wks. average	17	1.3 hrs. credit per week

The data further shows that for each week of student teaching in the semester universities' program the student earned .85 of an hour of credit. Those working in the quarter system earned an average of 1.3 hours of credit per week of student teaching.

However, when converted to semester hours, the 1.3 hours becomes .87 hours which is comparable to the .85 hours for those students in a semester type university.

In answer to how many times during the school year was student teaching offered, it was found that of the 23 departments on the semester system two (8.7%) used the first semester only, 5 (21.7%) used the second semester only, while 16 (69.6%) used both semesters. None offered student teaching during the summer.

Of the 17 departments on the quarter system, none used the first quarter only, 3 (17.6%) used the second quarter only, 1 (5.8%) used the third quarter only, 1 (5.8%) used both the first and second quarters only, 3 (17.6%) used the first and third quarters only, none used the second and third quarters only, and 9 (52.9%) used all three quarters for student teaching. Only one school offered student teaching during the summer in addition to the other quarters. (Table 7)

Table 7 - Frequency of Student Teaching

Semester N=23			Quarter N=17		
Semester	No.	Percent	Quarter	No.	Percent
First, only	2	8.7	1st qtr. only	---	---
Second, only	5	21.7	2nd qtr. only	3	17.6
Both	16	69.6	3rd qtr. only	1	5.8
Summer in Addition	---	---	1st two qtrs.	1	5.8
			1st & 3rd qtrs.	3	17.6
			2nd & 3rd qtrs.	---	---
			All 3 qtrs.	9	52.9
			Summer in Addition	1	5.8

Some teacher training departments advocate that the student teacher use the first week in his student teaching center as an orientation period and not be given a class to teach during this time. In response to this question, 35 (87.5%) of the 40 departments reported they recommended to their student teachers and their cooperating teachers that the first week be used as an orientation period with class teaching to begin the following week. The other 5 (12.5%) departments had no such requirement.

Again the question can be raised as to when a student should actually begin teaching a class in the classroom situation. Only three (7.5%) of the departments said their student teachers began teaching a class the very first day in the center. The great majority of departments, 37 (92.5%), reported that their student teachers did not begin teaching on the first day out. This is largely determined by three major things, i.e., (1) a summer experience program prior to or at the opening of the public school, (2) the cooperating teacher needing time to complete the unit he was teaching at the time of the arrival of the student teacher, and (3) the readiness of the student teacher.

The practice of bringing student teachers back to the campus for a one day or longer seminar sometime during, or at least at the end of the student teaching period was investigated. It was found that 37 (92.5%) of the teacher training departments brought their student teachers back to the campus while only 3 (7.5%) did not. Of the 37

departments doing this 5 (13.5%) brought their student teachers in only during the student teaching period. Fifteen (40.6%) brought their student teachers in only at the conclusion of student teaching, and 17 (45.9%) had their student teachers in both during and at the conclusion of student teaching. One department reported having their student teachers back on campus every two weeks during student teaching.

Supervision

All 40 teacher training departments made at least one supervisory visit to each student teacher. The range was from one to five visits with an average of 2.8 visits per student teacher during the time he was teaching in his assigned public school. The average number of visits was exactly the same for the 23 universities on the semester system and for the 17 on the quarter system.

It was found that for 16 (40.0%) of the departments one staff member made all the supervisory visits. In the other 24 (60.0%) more than one staff member participated. When more than one person did supervision, it was found that in 45.8 percent of the cases one staff member made all the supervisory visits to a single student teacher while the other student teachers had supervisory visits from more than one university staff member (54.2%).

Twenty-three (57.5%) of the teacher training departments brought their cooperating vocational agriculture teachers in for a conference prior to the opening of their (public) schools, while 17 (42.5%) did not. Eighteen (45.0%) had their cooperating teachers meet in conference

during the student-teaching period while 22 (55.0%) did not. Six (15.0%) of the departments had their cooperating teachers in for a conference both before school opened and then again during the student-teaching period. The other 34 (85.0%) departments met with their cooperating teachers only once.

ACTIVITIES REPORTED BY THE 40 UNIVERSITIES DIRECTED TO THE IMPROVEMENT OF TEACHER TRAINING PROGRAMS

The following is a list of practices reflecting new things being done as reported by the 40 respondents. Several activities were similar in nature, or the same thing worded differently, so they are listed only once.

1. Establishment of concentrated agricultural education options, i.e., ornamental horticulture, agricultural mechanics, agricultural products, etc.
2. Improvement of courses offered.
3. Innovative ideas in career and agri-business training.
4. Use of the F.F.A. for teaching F.F.A. leadership.
5. Develop a dual major.
6. Expand agricultural education to include extension education.
7. Student teachers, before going out, have to teach the basic shop work to freshmen entering the curriculum on campus under supervision of the shop instructor;--is added lab hours to basic shop course.
8. Working to eliminate the requirement of having a teaching minor as well as giving the teacher preparation program greater control of "basic" ag courses for breadth.
9. Moving to a required course as an introduction to agricultural education.
10. Holding workshops (EPDA funding) on how to teach the handicapped in agriculture, business, home economics, trades and industry, and vocational counselors.
11. New procedure in selecting student teaching centers. The school desiring approval submits a request to the teacher training institution and this is screened or reviewed by a committee composed of a teacher trainer, the state supervisor, and a member of the state agricultural teachers association.
12. Identification of possible student teaching centers which would permit specialization by curricula.

13. Increased student teaching to nine semester hours. Now require one semester of three hours per week of a student as a teacher aid in a vo-ag department prior to going out for student teaching.

14. Now requiring a Summer Experience of three weeks duration of all student teachers prior to student teaching.

15. Grade point requirement for admission to ag teacher education raised from 2.0 to 2.2 on a 4-point scale.

16. Use of video-tape in methods class. Each student required to introduce a unit or problem in teaching plan and taped while doing it. Replayed for critique purposes. Same is done in ag mechanics methods on demonstrations by students.

17. Added units dealing with the organization and operation of a cooperative vocational education program.

18. Lowered required hours in specific areas of agricultural subjects to facilitate the development of an agricultural specialty.

19. Encourage students to develop an agricultural specialty.

20. Encourage agricultural education majors to do an agribusiness internship between the junior and senior years. Five quarter hours of credit allowed for a successfully completed internship of one quarter duration.

21. Using a panel of people including cooperating teachers to interview student teacher applicants.

22. Involving student teachers in sectional, district, and state F.F.A. activities.

23. Take student teachers on field trips to visit junior colleges and area vocational centers.

24. May lengthen student teaching to eight weeks.

25. Have developed a volunteer summer apprentice program.

26. Developed a new course for undergraduates in agribusiness training in which students work in a business and have a related class also for the duration of one quarter.

27. Hold a one-week workshop in June for beginning teachers to help plan their year's program.

28. Developed a program on Agricultural Career Experiences.

29. Periodic evaluation of centers for student teaching.

30. Require a course of cooperating teachers in the supervision of student teachers.

31. Addition of an internship program in cooperating agricultural businesses,--6 semester hours credit--taken the semester before teaching.

32. Increased student teaching time from 6 to 9 weeks.

33. Requiring a sophomore field experience.

34. Developing a course in Youth Programs, i.e., F.F.A., and 4-H, and other groups.

35. Bi-weekly seminars are rotated among the student teaching centers so that each student teacher has an opportunity to become acquainted with the school and vo-ag program in several communities.

36. Limit student teachers in centers to no more than one student teacher per center per term, and no more than two terms per year for use of a particular center.

37. Changed methods course to include many sessions of micro-teaching.

38. Added some modules on working with the disadvantaged.

39. Increased emphasis on program evaluation.

40. Stepped up activity in special workshops--especially in ag mechanics and farm management.

41. Methods class now a preparation by prescription for vocational teachers. Seventy-four essential teaching behaviors (methods) needed by first year teachers of vocational agriculture have been identified. Work is done largely on an individual basis. The first six weeks of a "professional" semester are spent on these activities on campus followed by six weeks of student teaching. The last five weeks are devoted to a class-laboratory-workshop Program Planning Course.

42. Have broadened the agricultural mechanics offerings.

43. Developed a new course on "Program Planning."

44. Moved from one production agriculture program to five specializations.

45. Added video-taping as a part of instruction in methods.

46. Moving towards a competency based program. The plan is that competencies will be specified rather than courses.

47. A "Beginning Teacher Workshop" for first-year teachers of agriculture on campus,--2 semester hours credit. Principal objective is to help first-year teachers do better that which they are doing and plan to do.

48. All plans are made using behavioral objectives. Planning for the teaching period is greatly emphasized.

49. A panel of student teachers (after student teaching) discuss student teaching experiences at an Ag Ed. club meeting.

50. A completed information form on each student teacher is sent to his supervising or cooperating teacher.

51. At the termination of student teaching, each student teacher completes a form which analyzes his experience and this is sent to his supervising teacher.

52. Developing in-service training programs for teachers in areas of request.

53. Instituting an annual cooperating teachers conference.

54. Extended student teaching to a full quarter.

55. Reducing the number of required courses to allow students to specialize.

56. Revise Program Planning course to include planning of "Cooperative" Programs in Agriculture.

57. New emphasis on agri-business internship.

58. Established a pre-student teaching internship.

SUMMARY AND CONCLUSIONS

Summary

Most trainees in agricultural education receive a broad base in agriculture with minimum hours required in animal science, plant and soil science, agricultural mechanics, and agricultural economics. Approximately one third of the total required hours in agriculture are elective and can be used in developing a specialty.

A varying number of hours are required in non-vocational education courses, the most common of which is Educational Psychology, required by 85% of the forty departments. All forty departments required courses in vocational education including methods and student teaching. The schools on the semester system required an average of 3.6 hours in methods of teaching agriculture and those on the quarter system required an average of 4.2 hours. Forty-five percent of the schools were giving at least some instruction in the methods of organizing and operating a cooperative work experience program.

Student teachers were in their assigned schools for 9.6 weeks of student teaching for which those in the semester system received 8.2 hours of credit and those in the quarter system received an average of 12.6 hours. An average of 2.8 visits per student teacher were made during the time he was student teaching.

Conclusions

Agricultural education teacher educators are interested in and are making efforts to keep their training programs abreast of changing patterns and emphases in agricultural education. Those located in populous states with large centers of population concentrations are giving training in the operation of cooperative work experience programs, the operation of agricultural specialty programs, and some attention to urban agriculture.

Several universities are involved in innovative programs in teacher education. Representative of these are (1) methods of teaching the handicapped; (2) developing programs for agricultural career experiences for all grades; (3) preparation of vocational agriculture teachers by prescription, i.e., by developing proficiency in a pre-determined number of essential teaching behaviors; (4) expanding the use of behavioral objectives in teaching plans and procedures; and (5) the establishment of a pre-student teaching internship.

Several teacher training departments are instituting practices or methods that are new for them but which have already been put into practice by other departments.

Finally, there is a real sense of interest and need among those visited for a better means of communication among teacher training institutions relative to what is being done to improve the training of vocatonal agriculture teachers.